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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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DONALD K. FOREST
209 CROYDON AVE
ROCKVILLE MD 20850-4145

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EXAMINER

LIANG, R

ART UNIT	PAPER NUMBER
2774	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 08/506,032	Applicant(s) Donald K. Forest
	Examiner Regina Liang	Group Art Unit 2774

Responsive to communication(s) filed on Sep 29, 1998

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1, 19-41, 43-58, 61-80, 82-89, 94, 101-106, 108, and 112-205 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1, 19-41, 43-58, 61-80, 82-89, 94, 101-106, 108, and 112-205 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). 36

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 19-41, 43-58, 61-80, 82-89, 94, 101-106, 108, 112-205 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (US. PAT. NO. 5,177,328) in view of Baker (US. PAT. NO. 4,586,035), Lazzaro ("Computers for the Disabled"), Golding ("Audio Response Terminal"), Atkinson (US. PAT. NO. 4,931,783), Choi (US. PAT. NO. 5,285,265), Anderson (US. PAT. NO. 4,291,198).

Ito discloses a display system for displaying a plurality of selectable regions on the display screen (see Fig. 2), one or more selectable region associated respectively with a sequence of one or more character. Fig. 2 of Ito does not show each of the selectable region adjacent a side of the polygon on the display, and the plurality of selectable regions in Fig. 2 of Ito do not together at least partially circumscribing a region of the display. However, Fig. 12 of Ito teaches each of the selectable region adjacent a side of the polygon of the display, and the plurality of selectable regions together at least partially circumscribing a region of the display. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify each of the selectable region in Fig. 2 of Ito to be adjacent a side of the polygon on the display, and the plurality of selectable regions together at least partially circumscribing a region of the display since the number of selectable regions and the location of the selectable regions are the desirable choice based on the desired commands to be allocated to the selection regions (note col. 7, lines 32-40 of Ito).

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Ito does not explicitly disclose moving a cursor intersecting with a selectable region for selecting the selectable region. However, Baker teaches to use a cursor control for selecting a selectable region by moving the cursor within the selectable region. In addition, Baker also teaches the selectable region include an invisible subregion outside the display area. Thus, it would have been obvious to substitute one type of input manipulator for another to one having ordinary skill in the art at the time the invention was made to modify Ito to move the cursor within the selectable region for selecting the selectable region since Baker teaches it is a conventional way to activate a selectable region (col. 4, lines 15-19).

Ito does not disclose the selection means is responsive to a dwell event. However, Lazzaro discloses to select a selectable region in response to a dwell events and a pointer responsive to the movement of a body member of a user (see page 62 of Lazzaro). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the selection means of Ito to select the selectable regions in response to a dwell event as taught by Lazzaro so as to provide an input device which can be controlled by handicapped individuals whose movements are limited.

Ito as modified does not teach the display system comprising a voice output for a user having impaired speech for speaking the words responsive to the selection means. However, Golding had explicitly suggested the use of a speech synthesizer as an addition to a visual output to reproduce words, phrases, sentences to the user (page 5634), and Page 60 of Lazzaro explicitly states a speech-synthesis system has been employed to help blind people to read and nonverbal people to speak.

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Thus, it would have been further obvious to one having ordinary skill in the art at the time the invention was made to modify the display system of Ito as modified to have a voice output system so as to allow the operator options of using a visual image output or audible messages output which help blind people to read and nonverbal people to speak.

Ito as modified does not disclose a menu option associated with a plurality of submenu. However, it is well known in the art that a menu option is associated with a plurality of submenus (e.g., see Fig. 1 of Atkinson, EDIT is a menu, and UNDO, CUT, etc, are the submenus of the EDIT menu), and selecting a menu or submenu option in response to the intersection of the cursor and a selectable region. Thus, it would have been further obvious to one having ordinary skill in the art at the time the invention was made to modify the menu options of Ito as modified to have submenus as taught by Atkinson so as to provide additional selected functions to the user.

Ito as modified does not disclose an indicator for indicating the time difference between the cursor at a second location and the cursor at a first location. However, Choi discloses a device comprising an indicator (level meter inside the sub-screen as shown in Fig. 3) which shows the remaining time before an activation signal (selection) is optionally applied (col. 2, lines 60-64, col. 3, lines 40-42, 48-54). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display system of Ito as modified to have an indicator as taught by Choi so as to provide the user with an opportunity to cancel or change the selected region without any interruption.

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Fig. 2 of Ito as modified does not disclose each menu option associated respectively with a user activatable switch outside the display area. However, Fig. 2 and 8 of Anderson teaches each menu option associated respectively with a user activatable switch (16) outside the display area. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display system of Ito as modified to have a user activatable switch outside the display area associated respectively with each menu option as taught by Anderson so as to enable users to have convenient (soft key) access to computer services to exercise specific control over the direction of execution of the program.

Ito as modified teaches the display system as in independent claims 71, 74, 76.

Ito as modified by Baker, Golding and Lazzaro teaches the display system as in independent claims 73, 80, 163, 164.

Ito as modified by Lazzaro teaches the display system as in independent claims 85, 19, 52, 53, 54, 63, 65, 70, 72, 79.

Ito as modified by Lazzaro and Atkinson teaches the display system as in independent claim 33.

Ito as modified by Golding, Lazzaro, and Choi teaches the display system as in independent claim 134.

Ito as modified by Golding, Lazzaro and Anderson teaches the display system as in independent claims 159, 160, 162.

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Ito as modified by Golding, Lazzaro, Atkinson and Anderson teaches the display system as in independent claim 161.

Ito as modified by Baker, Golding teaches the display system as in independent claim 198.

Ito as modified by Anderson teaches the display system as in independent claim 67.

Fig. 5 of Ito discloses the display system comprising a display screen (3), means for at least partially delimiting a plurality of selectable regions (25A-25C), and each of the selectable regions outside the display screen and each associated respectively with a displayed menu option, which within the scope of independent claims 1, 106, 114, 147, 155, 165, 166, 94, 158, 170, 39, 61, 89, 78.

As to dependent claims 20-32, 34-38, 40-51, 55-58, 62, 64, 66, 68, 69, 75, 77, 82-84, 86-88, 101-105, 108, 112, 113, 115-133, 135-146, 148-154, 156, 157, 167-169, 171-197, 199-205, they are also rejected for the same reasons as set forth in the rejection above.

3. Applicant's arguments filed 9/29/98 have been fully considered but they are not persuasive.

Applicant's remarks regarding Ito on page 8 and claim 20 on pages 18-19 are not persuasive. As indicated in the rejection above, Fig. 2 of Ito teaches a conventional integrated display/input device comprising a plurality of selectable regions **on** the display screen. Fig. 12 of Ito is relied upon to show that each of the selectable region adjacent a side of the polygon of the display, and the plurality of selectable regions together at least partially circumscribing a region of the display area. The examiner is using this teaching of the location and the position of the plurality of the selectable regions together partially circumscribing a region of the display area shown in Fig. 12 of Ito to modify

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the display/input device in Fig. 2 of Ito. Applicant is ignoring the combination of Fig. 2 and Fig. 12 of Ito. The menu items locate at outside the display in Fig. 12 of Ito is irrelevant since Fig. 2 of Ito teaches the plurality of selectable regions are **on** the display screen. Therefore, Ito does not teach away from his modification.

In response to applicant's argument on page 9, 2nd and 3rd paragraphs there is no suggestion to combine the references Ito, Atkinson and Choi, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Applicant's remarks regarding claim 1 on page 12 are not persuasive. It is noted that all claims are rejected under 35 U.S.C. 103(a), on page 7 line 18- page 8, line 2 of the Office Action, the examiner did not mean that claim 1 is rejected by Fig. 5 of Ito alone. Since all the claimed limitations have been addressed on pages 4-6 of the Office Action, e.g., the selection means responsive to a dwell event is taught by Lazzaro, the voice output is taught by Golding on page 5, etc. On page 7 line 18- page 8, line 2 of the Office Action, the examiner just wanted to point out as to independent claims 1, 106, 114, 147, 155, 165, 166, 94, 158, 170, 39, 61, 89, 78, the claimed limitations such as the display system comprising a display screen, means for at least partially delimiting a plurality of

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selectable regions, and each of the selectable regions outside the display screen and each associated respectively with a displayed menu option, are taught by Fig. 5 of Ito.

Applicant's remarks regarding the combination of Ito and Baker on pages 14-16 are not persuasive. The examiner did not misread Baker since window 42 in Figs. 3, 8 and 9 of Baker is a display area or a working area and having an invisible selectable region outside the display area (window). The claims do not require that the display area or the working is the same size of the display screen, so the window 42 of Baker reads on "a display area" or "a working area" as claimed. In response to applicant's argument that there is no suggestion to combine the references Ito and Baker, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In addition, in response to applicant's argument that the modification of Baker is non-functional, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

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Applicant's remarks regarding Ito with Lazzaro on pages 17-18 are not persuasive. Again, Fig. 2 of Ito teaches the plurality of selectable regions are **on** the display screen. Combining dwell selection of Lazzaro with Ito does not render Ito inoperable for his function since a dwell selection of Lazzaro is an alternative input device for the selection of the selectable regions in the display/input device in Fig. 2 of Ito.

In response to applicant's allegation on page 18 that the "combination put forth in the Office Action does not contain a confining polygon, either on the display or elsewhere", Ito in Fig. 9, teaches the user moves the cursor for pointing at a displayed data input location, wherein the displayed data input locations, e.g., displayed keyboard, having border confining the location to the display area, which reads on the confining at least part of the first cursor to the first polygon as claimed.

Applicant's remarks regarding Ito as modified with Atkinson on pages 22-24 are not persuasive. First, in response to Applicant's argument that "Atkinson is not concerned with a problem shared with the present invention", it has been held that the mere fact that the references relied on by the Patent and Trademark Office fail to evince an appreciation of the problem identified and solved by applicant is not, standing alone, conclusive evidence of the nonobviousness of the claimed subject matter. The references may suggest doing what an applicant has done even though workers in the art were ignorant of the existence of the problem. Second, in response to applicant's argument that "Moving menus onto the display is contrary to Ito's express purpose", and "Ito teaches away from this modification, and therefore cannot be combined with Atkinson", again, Fig. 2 of Ito teaches the plurality of selectable regions are **on** the display screen, and each of the selectable regions associated

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respectively with one of the menu options. Atkinson teaches that it is well known in the art that a menu option is associated with a plurality of submenus. Thus, modifying Ito with Atkinson would modify the menu options of Ito to have a plurality submenus within the menu so as to provide additional selectable functions to the user. The linear menus of Atkinson is not modified into Ito's menu option. Finally, in response to applicant's argument regarding the combination of Ito, Lazzaro and Atkinson, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to applicant's remarks regarding the combination of Ito, Baker, Golding and Lazzaro on page 34 and applicant's allegation that "Golding does not disclose or suggest menu options representing sequences of one or more letters", applicant cannot show non-obviousness by attacking references individually where, as here the rejections are based on combination of references. The menu options representing sequences of one or more character are taught by Ito. Golding is cited to teach a display system comprising a voice output.

Applicant's remarks regarding Choi on pages 35-36 are not persuasive. Choi teaches a display device comprising an indicator for indicating the remaining time before an activation signal is applied, which is a programmable feature in the display device. Using Choi's programmable feature in TV display or any other display apparatus would provide the same function. The claim requires "means

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for indicating the difference between the predetermined period and the total duration of the plurality of periods". The indicating feature as taught by Choi reads on the claim. It is noted that the features upon which applicant relies (on page 36) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument regarding the user movement is the movement of a body member of the user including any one of head, eye, arm, etc., using any parts of the body member of the operator to operate the device do not make the claims allowable since it is obvious to modify the device to be operated by any parts of the body member of the operator since any moving parts of the body member can perform the selection function.

In response to applicant's argument regarding the claimed limitation for displaying different displayed sequences on the display screen, this is not allowable since it is obvious to modify the device of Ito as modified to display any kinds of displayed sequences on the display screen since it is the function of a display to display information.

Applicant's remarks on pages 8-68 do not overcome the art rejections since the combination of Ito, Baker, Lazzaro, Golding, Atkinson, Choi and Anderson teaches the claimed limitation as set forth in the rejection above.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE")

Or:

(703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (703) 305-4719. The examiner can normally be reached on Monday-Friday from 9AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Regina Liang
REGINA LIANG
PRIMARY EXAMINER
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RL